TORRENT™

User Manual

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PRE-INSTALLATION

To prevent damage to lightbar and vehicle, ensure that all equipment operates properly, and carefully plan where to mount and wire the lightbar and controlling equipment:

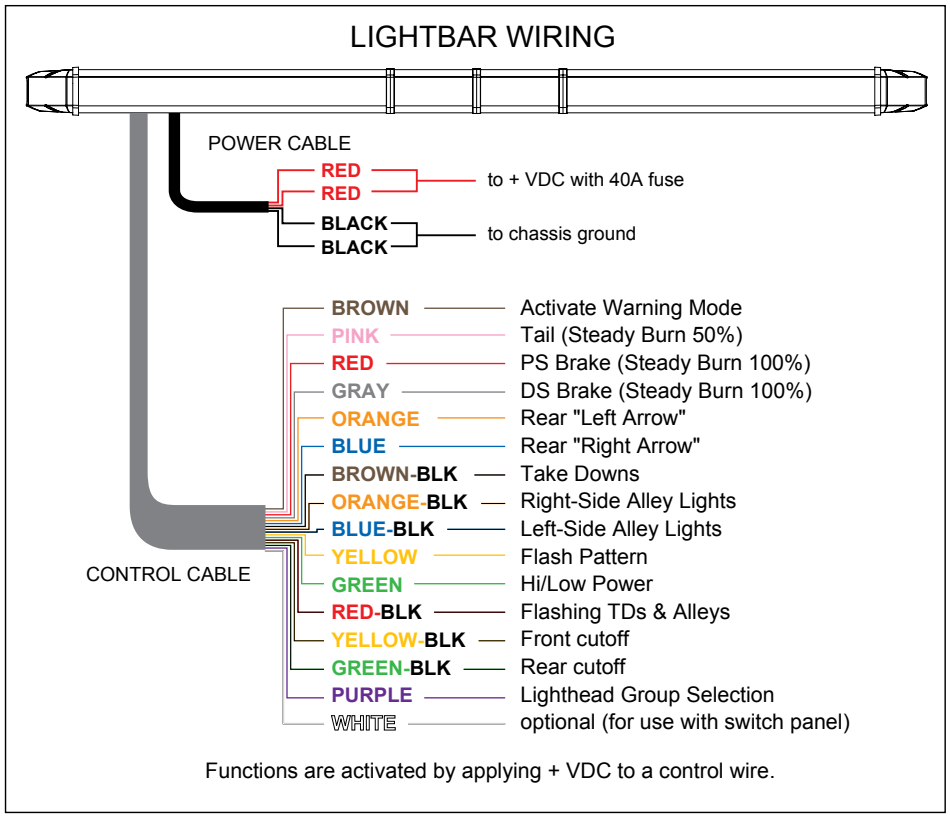
1. Verify that the lightbar and mounting hardware fit the vehicle.
2. Pre-configure desired lightbar functions.
3. Determine:
   - the location to mount the lightbar.
   - the location to route the lightbar's Power Cable.
   - the location to route the Function Cable, (eg. to siren, switch box, console).

WARNING: Take extreme care when routing wires around airbag areas to not interfere with it's proper operation.

4. Separate all electronic equipment wiring from two-way radio equipment wiring.
5. To avoid interference, keep two-way radio antennas a minimum of 50cm away from warning equipment.
6. After drilling holes, deburr and smooth sharp edges, and insert grommets to protect the wires from chafing.
7. When frame-ground the equipment, use the manufacturer-supplied ground locations in the vehicle.

WIRING & FUNCTIONS

Different applications require different functions. It is highly recommended to determine and configure the required functions prior to Installation; (refer to 'CONTROL CABLE' section).


LIGHTBAR WIRING
POWER CABLE
RED
RED
to + VDC with 40A fuse
BLACK
BLACK
to chassis ground
CONTROL CABLE
BROWN — Activate Warning Mode
PINK — Tail (Steady Burn 50%)
RED — PS Brake (Steady Burn 100%)
GRAY — DS Brake (Steady Burn 100%)
ORANGE — Rear "Left Arrow"
BLUE — Rear "Right Arrow"
BROWN-BLK — Take Downs
ORANGE-BLK — Right-Side Alley Lights
BLUE-BLK — Left-Side Alley Lights
YELLOW — Flash Pattern
GREEN — Hi/Low Power
RED-BLK — Flashing TDs & Alleys
YELLOW-BLK — Front cutoff
GREEN-BLK — Rear cutoff
PURPLE — Lighthead Group Selection
WHITE — optional (for use with switch panel)
Functions are activated by applying + VDC to a control wire.

POWER CABLE

1. Route Power Cable to the vehicle firewall towards the battery.
2. Follow factory wiring harness through the firewall. It may be necessary to drill a hole in the firewall. Ensure that there are no components that could be damaged from the drilling.
3. Route the cable to the battery.
4. Splice the 2 **RED** wires to form a single wire.
5. Install a 40Amp fuse (user-supplied) on the end of **RED** wire, then connect to battery.
6. Splice the 2 **BLACK** wires to form a single wire.
7. Connect **BLACK** wire to the factory chassis ground adjacent to the battery.

NOTE: make sure that all wires of power cable are securely connected to power source.

CONTROL CABLE

1. Route Control Cable towards the dash area to a switch panel (user-supplied).
2. Connect the required wires to the switch panel.

WARNING MODE

In Warning Mode, the flash patterns can be selected from a list of standard flash patterns. Activate Warning Mode by applying **+VDC** to **BROWN** wire.

To configure its flash pattern, tap **+VDC** to **YELLOW** wire:

- Once for next pattern (refer to Flash Patterns chart).
- Quickly 3 times for reset to FP#0.

NOTE: This unit may not be factory set at FP#0.

FP#F	lash Patterns
0	Single Slow
1	Single Mid
2	Single Fast
3	Double 1
4	Double 2
5	Quad
6	Quint
7	Ultra
8	Single-Quad
9	Single H/L
10	Random

LIGHTHEAD GROUPING

While in Warning Mode, the Lighthead Groups can be selected by tapping**+VDC** to **PURPLE** wire:

- Once for next grouping (refer to Head Grouping chart).
- Quickly 3 times for reset to HG#1.

HG#	Head Grouping
1	All
2	Split
3	Cross
4	Outside-In
5	Side-by-Side

HG#1 ALL ———— All lightheads will flash at the same time.

HG#2 SPLIT ———— Left side lightheads will alternate with Right side lightheads.

HG#3 CROSS ———— Front-Left & Rear-Right lightheads will alternate with Front-Right & Rear-Left lightheads.

HG#4 OUTSIDE-IN — Outter lightheads will alternate with Inner lightheads.

HG#5 SIDE-by-SIDE — Odd numbered lightheads will alternate with Even numbered lightheads.

STOP/TAIL/TURN

The outter-most lightheads in the rear are configured with the Stop/Tail/Turn function. To activate this function, apply **+VDC** to:

- **PINK** wire for both lightheads in steady burn 50% (Tail function)
- **RED** wire for Passenger Side lighthead in steady burn 100% (PS Brake)
- **GRAY** wire for Driver Side lighthead in steady burn 100% (DS Brake)

Connect the above wires to the appropriate vehicle Stop/Tail/Turn signal wires.

TRAFFIC ARROWS

Activate Traffic Arrow functions by applying **+VDC** to:

- **ORANGE** wire for Left Arrow.
- **BLUE** wire for Right Arrow.
- **ORANGE** & **BLUE** wires for Center Out.

To configure the Traffic Arrow flash patterns, tap **+VDC** to **YELLOW** wire:

- Once for next pattern (refer to Traffic Arrow Patterns chart).
- Quickly 3 times within 1 second for reset to FP#0.

FP#T	raffic Arrow Patterns
0	Sweep Single
1	Sweep Double
2	Sweep Triple
3	Sweep Single End-Double
4	S olid
5	S olid End-Double
6	S olid Chaser
7	S olid Fade
8	B link Double
9	B link Triple
10	Blink Solid

NOTE: If the bar is equipped with the Dual Color Traffic Arrow option, the rear Traffic arrows will automatically switch to Amber when activated; and will automatically switch back when deactivated.

FLASHING TDs & ALLEYs

Activate Flashing TDs & Alleys by applying **+VDC** to **RED-BLK** wire. To scroll to a different configuration, tap **+VDC** to **YELLOW** wire:

- TDs and Alleys flashing
- Alleys only flashing
- TDs only flashing

NOTE: Flashing TDs & Alleys have priority over the steady burn functions.

OTHERS

To activate other functions, apply **+VDC** to:

- **BROWN-BLK** wire for Take Down Lights
- **ORANGE- BLK** wire for Right-Side Alley Light
- **BLUE-BLK** wire for Left-Side Alley Light
- **YELLOW- BLK** wire for Front cutoff
- **GREEN- BLK** wire for Rear cutoff
- **GREEN** wire for Low Power

PERMANENT MOUNT

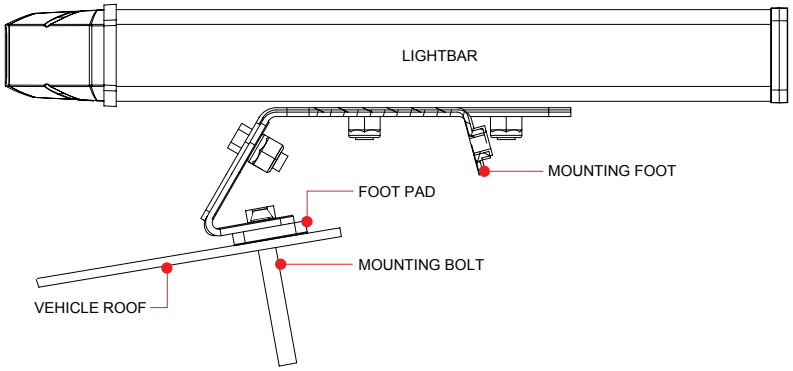
Installation includes centering the lightbar on the vehicle's roof, leveling the lightbar, and scribing and drilling holes for mounting the lightbar permanently to the roof.

1. Place lightbar on the vehicle roof at the desired location. The lightbar is usually centered on the door center post (B-pillar).
2. Adjust both mounting feet in or out as necessary until the foot pads rest near the edge of the roof or gutter where the roof is the most rigid. Make sure the lightbar and the mounting feet are centered left to right on the vehicle.
3. Level the lightbar by shifting the lightbar slightly forward or back.
4. Using the mounting feet as a template, mark two drilling holes on each end of the vehicle roof.
5. Carefully remove the lightbar and turn it upside down, and ensure that the mounting feet do not shift place.
6. Tighten the nuts that secure the mounting feet to the lightbar.
7. Drill four holes at the previously marked drilling positions.

WARNING: DO NOT DRILL THROUGH the roof support structure that spans the distance between the driver's and passenger's side. Drilling through this will weaken the roof of the vehicle.

NOTE: Before drilling holes, ensure that the holes will go through sheet metal and not the upholstery. And ensure that no damages are caused to the vehicle components.

8. Place lightbar on the vehicle roof and align the mounting holes with the mounting feet. Secure mounting feet to vehicle roof with carriage bolts.



Front view of lightbar with Permanent mount

NOTE: After installation, frequently inspect the lightbar and mounting feet to ensure that all fasteners and brackets are tight.

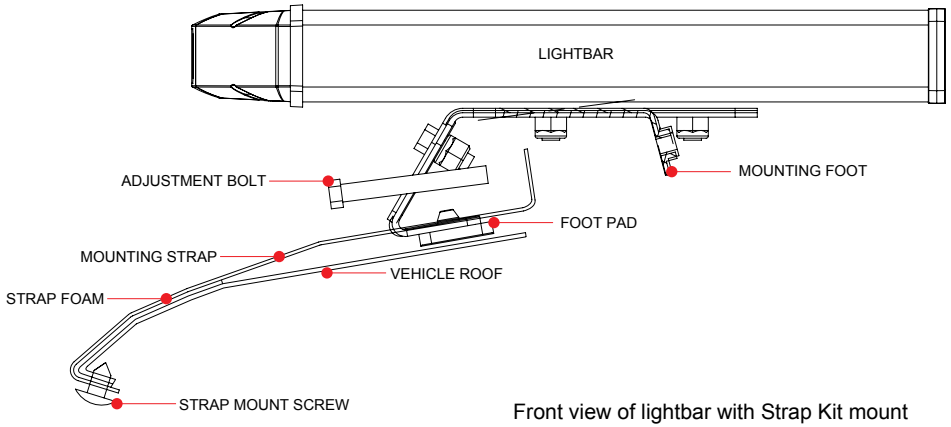
STRAP KIT MOUNT

The Strap Kit is designed for specific make and mode of vehicle. Before installation, ensure that the correct strap kit is used.

1. Place the lightbar on the vehicle roof at the desired location. Usually, the lightbar should be centered on the center door post (B-pillar).

NOTE: Water may leak into the vehicle interior if the straps are improperly positioned. Ensure that the straps are positioned above or near the center door post (B-pillar).

2. Determine where the straps will attach to the vehicle.



Front view of lightbar with Strap Kit mount

3. Place the straps in position on the roof sheet metal as shown in diagram.
4. Use the straps as a template and mark the drilling hole locations.
5. Drill holes according to the marked locations.
6. Apply a silicone sealant (user-supplier) around the holes before attaching the straps.
7. Secure the straps with the sheet metal screws.

NOTE: After installation, frequently inspect the lightbar and mounting feet to ensure that all fasteners and brackets are tight.

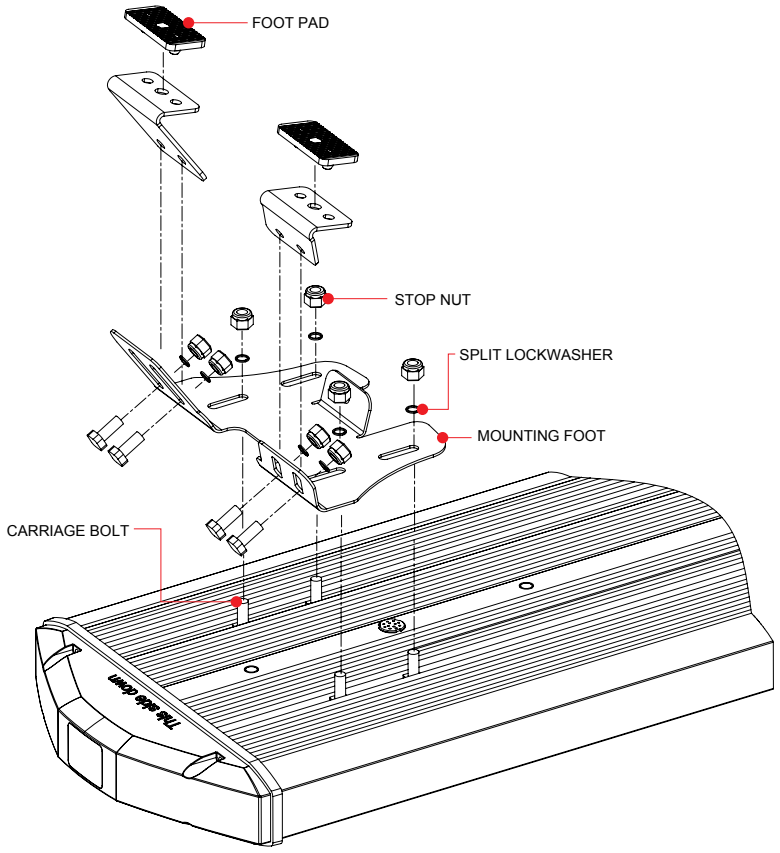
8. Place the lightbar on the vehicle roof, and align strap bolt holes with lightbar mounting feet bolt holes.
9. Insert adjustment bolt through strap bolt hole all the way to mounting feet bolt hole.
10. Tighten bolts

VEHICLE ROOF INSTALLATION

ADJUSTABLE FEET

Install Mounting Feet on the Lightbar

1. Turn the lightbar upside down.
2. Place mounting feet over the carriage bolts.
3. Attach a lockwasher and a nut on each of the carriage bolts, but do not completely tighten the bolts. Leave them loose enough to reposition the mounting foot.

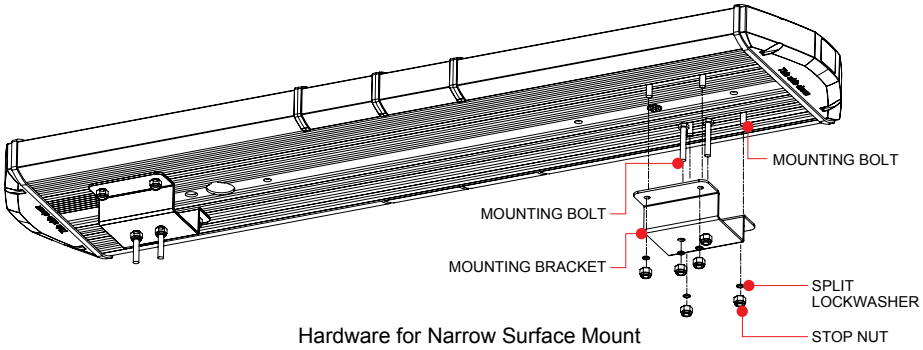


Upside down view of lightbar with mounting foot

FLAT SURFACE INSTALLATION

NARROW SURFACE MOUNT

1. Turn the lightbar upside down.
2. Place mounting feet over the carriage bolts.
3. Attach a lockwasher and a nut on each of the carriage bolts, but do not completely tighten the bolts. Leave them loose enough to reposition the mounting foot.

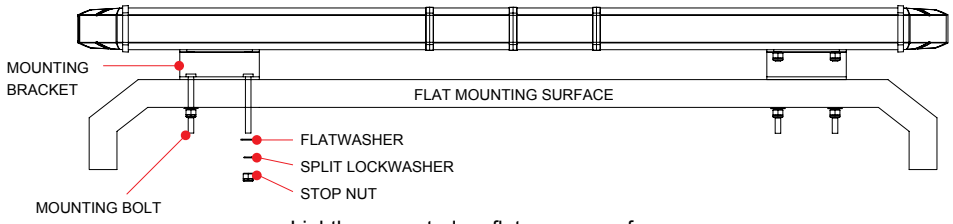


Hardware for Narrow Surface Mount

4. Place lightbar on the mounting surface at the desired location.
5. Adjust both mounting foot assemblies in or out as necessary. If possible, try to keep mounting feet near the ends of the lightbar.
6. Using the mounting feet as a template, mark two drilling holes on each end of the mounting surface.
7. Carefully remove the lightbar and turn it upside down, and ensure that the mounting feet do not shift place.
8. Tighten the nuts that secure the mounting feet to the lightbar.

NOTE: Before drilling holes in ANY part of the vehicle, be sure that both sides of the mounting surface are clear of parts that could be damaged, such as brake lines, fuel lines, electrical wiring, or other vital parts

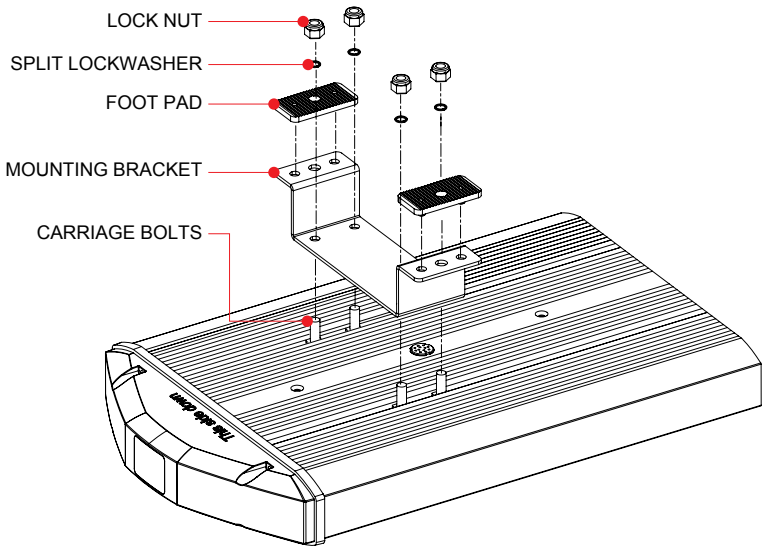
9. Drill four holes at the previously marked drilling positions.
10. Place lightbar on the mounting surface and align mounting holes with the mounting feet.
11. Secure mounting feet to mounting surface with carriage bolts.



Lightbar mounted on flat narrow surface

WIDE SURFACE MOUNT

1. Turn the lightbar upside down.
2. Place mounting feet over the carriage bolts.
3. Attach a lockwasher and a nut on each of the carriage bolts, but do not completely tighten the bolts. Leave them loose enough to reposition the mounting foot.

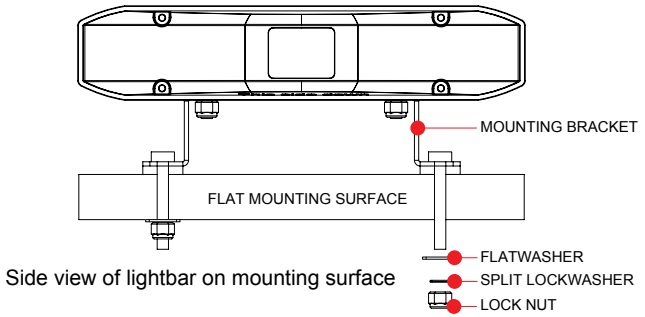


Upside down view of lightbar with mounting foot

4. Place lightbar on the mounting surface at the desired location.
5. Adjust both mounting foot assemblies in or out as necessary. If possible, try to keep mounting feet near the ends of the lightbar.
6. Using the mounting feet as a template, mark two drilling holes on each end of the mounting surface.
7. Carefully remove the lightbar and turn it upside down, and ensure that the mounting feet do not shift place.
8. Tighten the nuts that secure the mounting feet to the lightbar.

NOTE: Before drilling holes in ANY part of the vehicle, be sure that both sides of the mounting surface are clear of parts that could be damaged, such as brake lines, fuel lines, electrical wiring, or other vital parts

9. Drill four holes at the previously marked drilling positions.
10. Place lightbar on the mounting surface and align the mounting holes with the mounting feet.
11. Secure mounting feet t o mounting surface with carriage bolts.



Side view of lightbar on mounting surface